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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,812	07/22/2003	Peter Flohr	003-068	5286

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EXAMINER

GRAVINI, STEPHEN MICHAEL

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/623,812

Applicant(s)

FLOHR ET AL.

Examiner

Stephen Gravini

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20040905.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

Claims 1-5 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Knöpfel et al. (US 6,126,439). Knöpfel is considered to disclose the claimed invention comprising:

a swirl generator **10** for a combustion-air flow and means for injecting fuel for producing a main flow;

a combustion chamber **30** arranged downstream of the swirl generator; and

a cavity **20** arranged between the swirl generator and the combustion chamber in which cavity a secondary flow can be produced, that encloses the main flow; or alternatively;

a cavity arranged between the swirl generator and the combustion chamber in which a secondary flow can be produced (please see column 4 lines 1-36). Knöpfel is also considered to disclose the claimed torodial shape, as shown in figure **2**, injection means **17**, and mixing section arrangements (column 3 line 29).

Claim Rejections - 35 USC § 103

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knöpfel in view of Büchner et al. Knöpfel is considered to disclose the claimed invention, as discussed above under the anticipatory rejection, except for the claimed pilot flame configuration and arrangement. Büchner, another burner for a heat generator, is

Art Unit: 3749

considered to disclose a pilot flame configuration and arrangement at column 4 line 24. It would have been obvious to one skilled in the art to combine the teachings of Knöpfel with the pilot flame configuration and arrangement considered to be disclosed by Büchner for the purpose of allowing a secondary flow in burner that may be used with a main burner flow.

Response to Arguments

Applicant's arguments filed December 6, 2004 have been fully considered but they are not persuasive.

anticipation

Applicants argue that the claimed invention is distinguished from primary reference Knöpfel because that reference fails to describe a cavity for forming a secondary flow, enclosing the main flow from the swirl generator and that reference fails to describe an annular torroidal shape. Those features are considered as statements of intended use, such that the structure of the primary reference is capable of a secondary flow that can be produced and torroidal shape immediately adjacent the cavity as shown in figure 2 and disclosed in column 3 lines 25-67.

The anticipatory rejection is considered proper and maintained.

obviousness

Applicants argue that the secondary reference Büchner's pilot flame is not formed by a secondary flow from a cavity between a swirl generator and a combustion chamber, but is instead formed in the swirl generator by a partial stream of the main flow of fuel and air. The arguments can not be given patentable weight unless the

Art Unit: 3749

claims clearly recite the features distinct from the prior art. The argued claim recites a secondary flow is configured and arranged to be used as a pilot flame. It is considered that the secondary reference discloses a pilot flame arranged and configured from a secondary flow.

The obviousness rejection is considered proper and maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Gravini whose telephone number is 571 272 4875. The examiner can normally be reached on normal weekday business hours (east coast time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira S. Lazarus can be reached on 571 272 4877. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SMG
January 19, 2005

Steph M. Gharini